

TABLE 4.15.1.2–1.—Facilities Managing Radionuclides^a at LLNL

Building Number	Radionuclide	Approximate^c Quantity or Limit (kg, lb, or Ci)	Status^d
Building 131 High Bay	Natural thorium Depleted uranium	0.5 kg 7,700 kg Inventory maintained below Category 3 thresholds	Radiological facility
Building 132N	Natural uranium Depleted uranium Sealed sources	Inventory maintained below Category 3 thresholds	Radiological facility
Building 132S	Natural uranium Depleted uranium Sealed sources	Inventory maintained below Category 3 thresholds	Radiological facility
Building 151	15 radionuclides	Inventory maintained below Category 3 thresholds. Ratio approximately 0.633 ^b	Radiological facility
Building 152	Sealed sources	Inventory maintained below Category 3 thresholds	Radiological facility
Building 154	Sealed sources	Inventory maintained below Category 3 thresholds	Radiological facility
Building 190	Tritium Cobalt-60 Americium-241 Plutonium-238 Plutonium-239	20.0 Ci 1.43×10^{-4} Ci 1.11×10^{-5} Ci 0.027 Ci 1.50 Ci	Radiological facility
Building 191	Depleted uranium	0.008 Ci	Radiological facility
Building 194	Uranium-235 Plutonium-239 Sealed sources	0.192 kg 0.003 kg Inventory maintained below Category 3 thresholds	Radiological facility
Building 231	Natural thorium Natural uranium Depleted uranium Rhenium	0.5 kg 9.5 kg 3,000 kg 60 kg	Radiological facility
Building 231 vault	Natural thorium Uranium-235 Uranium-238	11 kg 3.4 kg 1,700 kg	Radiological facility
Building 232 Fenced Area and 233 Vault	Thorium Low enriched uranium Natural or depleted uranium	150 kg 0.3 kg 4,000 kg	Radiological facility
Building 239	Plutonium, fuel grade equivalent ^e Highly enriched uranium ^e Depleted uranium Tritium	6 kg 25kg/50 kg ^f 500 kg 0.02 kg	Varies; resident inventory maintained below Category 3 thresholds

TABLE 4.15.1.2–1.—Facilities Managing Radionuclides at LLNL (continued)

Building	Approximate ^c Quantity or		
Number	Radionuclide	Limit (kg, lb, or Ci)	Status ^d
Building 241	Depleted uranium 5 radionuclides	2,650 kg Inventory maintained below Category 3 thresholds	Radiological facility
Building 251	42-Category 2 radionuclides	Inventory maintained below Category 2 thresholds	Category 2 facility
Building 255E	Sealed sources	Inventory maintained below Category 3 thresholds	Radiological facility
Building 261/262	16 Radionuclides	Inventory maintained below Category 3 thresholds	Radiological facility
	Thorium	100 lbs (Metal)	
	Natural uranium	100 lb	
	Depleted uranium	300 lb	
Building 322	Depleted uranium	30 kg	Radiological facility
Building 327	Depleted uranium	95 kg	Radiological facility
Building 331 ^g	Tritium ^e	0.030kg/0.035 kg ^f	Inventory is distributed between two segments; small quantities of other radionuclides may be present but the facility will remain a Category 3 facility
	Plutonium-239	900 g	
	Plutonium, fuel-grade equivalent	260 g	
	Uranium-235	700 g	
	HEU	5 kg	
Building 332	Plutonium ^e	700kg/1,400 kg ^f	Category 2 facility
	Enriched uranium ^e	500 kg	
	Depleted or natural uranium ^e	3,000 kg	
Building 334 ^g	Plutonium, fuel grade equivalent ^e	18 kg	Category 3 facility
	Enriched uranium	100 kg	
	Depleted uranium	500 kg	
	Tritium	0.0001 kg	
Building 361	Phosphorus-32	0.027 Ci	Radiological facility
	Sulphur-35	0.008 Ci	
	Carbon-14	0.131 Ci	
	Tritium	0.29 Ci	
Building 362	Carbon-14	0.036 Ci	Radiological facility
	Tritium	0.006 Ci	
Building 363	Carbon-14	0.002Ci	Radiological facility
	Tritium	0.001 Ci	
Building 364	Cesium-137 (sealed Source)	3.5 × 10 ³ Ci	Radiological facility
Building 366	Phosphorus-32	0.007 Ci	Radiological facility
Building 378	20 radionuclides (Sealed sources)	Inventory maintained below Category 3 thresholds	Radiological facility
Building 379	20 radionuclides (Sealed sources)	Inventory maintained below Category 3 thresholds	Radiological facility
Building 381	Tritium	8.5 Ci (storage limit – 20 Ci)	Radiological facility
	Sealed sources	Inventory maintained below Category 3 thresholds	

TABLE 4.15.1.2–1.—Facilities Managing Radionuclides at LLNL (continued)

Building Number	Radionuclide	Approximate ^c Quantity or	
		Limit (kg, lb, or Ci)	Status ^d
RHWM Facilities (Area 514)	Miscellaneous radionuclides	Inventory maintained below Cat 3 thresholds	Radiological facility
RHWM Facilities (Area 612)	Cat 2 radionuclides	See Appendix B for inventory limits	Category 2 facility
DWTF Buildings 695/696S	Cat 3 radionuclides	See Appendix B for inventory limits	Category 3 facility
DWTF Building 693/ 696RWSA	Cat 2 radionuclides	See Appendix B for inventory limits	Category 2 facility
Cargo Container Testing facility (planned)	Depleted or natural uranium	50 kg	Radiological facility
	Uranium-235		
	Plutonium-239	1.0 kg (metal), 0.2 kg (oxide)	
	Sealed sources	0.40 kg Inventory maintained below Category 3 thresholds	

Source: LLNL 1999b, g; LLNL 2000d, k, l, o, p; LLNL 2001b,e, f, aw; LLNL 2002ar, cq, co.

^aSummary information, additional radionuclides may be present in these facilities.

^bRatio of activity to Category 3 threshold must be below 0.8 in order for a radiological accident analysis to not be required in a hazard analysis report.

^cInventories are snapshots in time. The information is provided to give the reader a degree of scale and is not (unless otherwise stated) a limit.

^dCategory 2 – Hazard analysis shows the potential for significant onsite consequences. Category 3 – Hazard analysis shows the potential for only significant localized consequences. Radiological–Facilities that do not meet or exceed Category 3 threshold criteria but still possess some amount of radioactive material. Category 2 and Category 3 thresholds are defined in DOE Standard DOE-STD-1027-92 (DOE 1997d).

^eAdministrative limit.

^fValues are included for No Action Alternative and the Proposed Action, respectively.

^gMaterials in Buildings 331 and 334 are within the Superblock Administrative Limits for plutonium and uranium.

Ci = curies; DWTF = Decontamination and Waste Treatment Facility; kg = kilograms; RHWM = radioactive and hazardous waste management; RWSA = radioactive waste storage area.